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REPLY BRIEF

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I. Introduction

An Examiner's Answer addressing Appellant's Appeal Brief was mailed on August 7, 2009. All pending claims remain rejected for identical reasons as set forth in the Final Rejection from which Appellant appealed. Appellant presents this Reply Brief to further address continued errors of interpretation of the claims and the cited art, as well as to further show that the cited art neither anticipates nor renders obvious the pending claims.

II. Argument

A. Interpretation of claim term “external”

Appellant notes first the errors in the Examiner’s rejections, as well as in the Examiner’s Answer, especially those of claim interpretation. As is well known, the claims must be interpreted in light of the specification, and limitations from the specification cannot be read into the claims. The rejections of record and the Examiner’s Answer each fail to correctly interpret the terms of the claims, resulting in rejections that should not stand.

No reasonable interpretation of the term “external” as it is used in the Appellant’s claims allows for the construction applied in the Examiner’s Answer. The only reasonable interpretation of the term “external” as it is used in Appellant’s claims is that which Appellant has urged, in its responses and its Appeal Brief. That interpretation is clear. The term “external” refers to the outside of the body.

For further example, Appellant’s specification, at least at paragraphs 0016, 0018, 0019, and 0027, refer to “the external surface of the subject of the imaging” in paragraph 0016, to “determine the edge of an object” in paragraph 0018, to “reflect from an external surface of an object” in paragraph 0019, and to “image the external surface of the subject” in paragraph 0027. Still further, Appellant also discusses an internal imaging of the object, separate from the external imaging. This is the imaging that is internal, and clearly shows the difference between external imaging for mapping the external surface of an object, and internal imaging for mapping internal features. The construction is clear from a reading of the specification.

B. Discussion of the cited art

Appellant notes second the general nature of the cited art, as it is pertinent to an understanding of the errors in the rejections. All of the art cited in the rejections, namely Johnson (US Pat. No. 4,222,274), Seo (US Pat. No. 6,685,644), Teboul (US Pat. No. 5,709,206), Hossack (US Pat. No. 6,423,002), Dick (US Pat. No. 4,233,988), Martin (US Pat. No. 6,275,722), and Desai (US Pat. No. 5,433,198), is directed to imaging internal portions

of the body, that is, features that are within the body, not external features or contours of the body. This has been shown extensively in Appellant's previous responses to office actions, as well as in Appellant's Appeal Brief, are incorporated herein by reference in their entireties, but are not repeated herein for purposes of brevity. However, it should be noted that the only allegations of any external imaging are those made by the Examiner, and that they are wholly unsupported by the actual text of the references.

Specifically, Johnson focuses ultrasound so as to image features internal to an object. This is clear from reading the specification and looking at the figures. All of the features discussed in Johnson are internal. Further, Johnson at col. 15, ll. 46-53 discusses image construction for the images resulting from the internal imaging of an object. Images construction is accomplished through using scattering points (all of which are shown and discussed as internal scattering points, specifically points 284 and 286). Only scattering points internal to the object are used in construction of the image. Johnson is directed solely to internal imaging. The Examiner's Answer contains only argument that Johnson "is capable of detecting features characterized as external in the sense of being also externally visible." This ignores all the clear teaching within Johnson, and substitutes the Examiner's opinion for the unambiguous language of the reference. This is improper.

With respect to Seo, the abstract clearly and unequivocally states "[t]he inside of an object to be examined is scanned with a first ultrasound beam through the first probe ... The inside of the object is scanned with a second ultrasound beam through the second probe ..." (emphasis added). The imaging device 11 is shown in operation in Figure 4 as scanning internally. The alleged imaging device 26 is in fact a transducer on the end of an internal probe 22. The Examiner's Answer seems to confuse the difference between an external imaging device (probe 11) and an external surface. While it is true that the device 11 is external to the body, the claims recite imaging to gather external features of the object, not the internal features that are gathered by Seo's probes. The external imaging device 11 is external to the object. It does not, however, image external features. It images internal features. There is absolutely no teaching or suggestion of any imaging of external features of an object in Seo.

Further, with respect to Seo, the Examiner's Answer asserts that "adventitia and artery immediate surroundment would be understood to be external surface features of the

artery proper by the artisan.” This ignores the fact that all of the features the Examiner’s Answer addresses are in fact internal features. While it is true that an adventitia is not a part of the organ it surrounds, it is nevertheless an internal feature, as it is an outermost connective tissue (see Stedman’s Medical Dictionary). There is no external imaging in Seo, as the term external must be construed (as is discussed below). The Examiner’s Answer further attempts to change the clear teaching of Seo by asserting without any support whatsoever that “external” as is recited in Appellant’s claims can be interpreted to be external to an internal feature. This ignores the required construction of Appellant’s term external (as is discussed below).

Appellant presented further arguments on specific claims in its Appeal Brief. Those arguments are incorporated in their entireties by reference herein. Since neither Johnson nor Seo teaches or discloses any external imaging, using the proper construction of Appellant’s term “external,” no rejection of the claims under 35 U.S.C. § 102 can be sustained.

The remaining rejections each rely on a combination of Johnson or Seo, as shown to be incorrectly interpreted above, with some other reference or references. Since neither Johnson nor Seo, either alone or in combination with each other or any other of the cited references, teaches or suggests the actual limitations of the claims, as properly constructed, no rejection of the claims under 35 U.S.C. § 103 can be sustained.

Specifically, Teboul is relied upon in the Examiner’s Answer for the allegation that Teboul teaches “during mammography external or surface features (nipple, areole, external duct entrances) would be gathered among the imaged data.” This is stated without any support whatsoever for the assertion. There is no discussion of where in Teboul such an assertion is supported. In fact, Teboul is not directed at all to mammography, but instead to sonography. The Abstract of Teboul specifically states “[t]he present invention relates to a method and an apparatus for processing a plurality of ultrasound images of ductolobular systems in a breast” (emphasis added), and the first sentence of the “Background” section states “[t]he present invention relates to the sonographic method and imaging system to detect breast cancer at early stages.” Still further, any external images of Teboul, applied to the term external as used as must be construed in Appellant’s claims, are merely templates (see for example Figures 10 and 12 of Teboul and related discussion at col. 29, ll. 16-24 and at col. 30, l. 66 to col. 31, l. 2). Teboul does not teach external imaging. No combination of

Johnson and Teboul teaches external imaging, which is recited in each of the independent claims under Appeal.

Hossack is cited for its alleged examination of the external surface of a heart or an artery. The Examiner's Answer argument that this is external is similar to the argument set forth asserting that Seo teaches external imaging. Why then is Hossack cited at all? Further, the argument assigns a construction of the term "external" that is improper, as has been described above. The heart and coronary artery are still internal to the body, and as such, no external imaging is provided in Hossack.

C. Admissions in the Examiner's Answer

The Examiner's Answer admits at Page 5 that "Johnson does not explicitly state that the system is adapted so that external feature data can be gathered." This negates by admission the rejection under 35 U.S.C. § 102 of claim 9.

III. Conclusion

The Examiner's Answer attempts to assign an overly broad and unsupportable claim construction for the term "external" in Appellant's claims. The Examiner's construction of the term is clearly in error. Further, the Examiner's Answer attempts to interpret a number of references, each having absolutely nothing to do with external imaging, as teaching or suggesting external imaging. This is also clearly error. The claims are clearly allowable over the cited art.

For at least the reasons discussed above, and for reasons as presented in Appellant's Appeal Brief and previous responses, Appellant submits that all pending claims are patentable. Accordingly, Appellant requests that the Board of Appeals reverse the Examiner's decisions regarding claims 1-26.

Respectfully submitted,

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